## Abstract of the Disclosure

A graphametric equalizer has graphic and parametric equalization capabilities within a single non-redundant system. A translation function capability converts user selected inputs for center frequency, bandwidth and gain into allpass filter parameters to realize an allpass filter-based equalization filter structure capable of performing graphic and/or parametric equalization on-the-fly. The graphametric equalizer has a softening function capability to time user inputs and increment filter parameters gracefully such that the graphametric equalizer can be recharacterized with new filter parameters on-the-fly without incurring undesirable audible artifacts.